

**ABSTRACT**

A system, method and apparatus for protecting circuit components from unauthorized access. The circuit components to be protected are disposed on a first layer of a substrate with a plurality of layers. A cover member composed of a plurality of layers is abutted to the substrate, defining an enclosure space for enclosing the circuit components to be protected. A three-dimensional resistive network sensor surrounds the protected circuit components. The sensor comprises at least one conduction path in at least one of the layers below the first layer of the substrate and at least one conduction path in at least one of the layers of the cover member and also comprises a plurality of vias transverse to and electrically connecting the conduction paths. A short or open in the sensor will be detected by a tamper detection circuit that is disposed on the first layer of a substrate.